

a first constant fraction discriminator that receives said first amplified signal and produces a first pulse in response;

a second constant fraction discriminator that receives said second amplified signal and produces a second pulse in response;

5 a first time-to-digital converter that receives said first pulse and produces a first digital signal representative of said first pulse's time of arrival;

a second time-to-digital converter that receives said second pulse and produces a second digital signal representative of said second pulse's time of arrival; and,

10 a computer that receives said first digital signal and said second digital signal and produces an ion spectrum.

8. The time of flight mass spectrometer of Claim 1, 2, 3, 4, 5, 6, or 7 further comprising a reflector that increases said flight tube's apparent length.

15 9. The time of flight mass spectrometer of Claim 1, 2, 3, 4, 5, 6, or 7 wherein said first anode and said second anode are the same physical size.

10. The time of flight mass spectrometer of Claim 1, 2, 3, 4, 5, 6, or 7 wherein said first anode and said second anode are different in physical size.

### REMARKS

20 In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. According, the Examiner is respectfully requested to pass this application to issue.

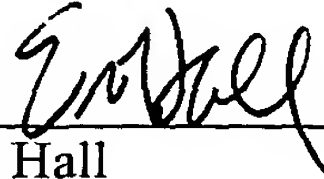
Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2375, under Order No. HO-P01862US1/09903423 from  
25 which the undersigned is authorized to draw.

Application No.: 09/720,182

Docket No.: HO-P01862US0

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Respectfully submitted,

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